

ABSTRACT OF THE DISCLOSURE

A synthetic method for preparation of hybrid inorganic/organic energetic nanocomposites is disclosed herein. The method employs the use of stable metal inorganic salts and organic solvents as well as an organic polymer with good solubility in the solvent system to produce novel nanocomposite energetic materials. In addition, fuel metal powders (particularly those that are oxophilic) can be incorporated into composition. This material has been characterized by thermal methods, energy-filtered transmission electron microscopy (EFTEM), N₂ adsorption/desorption methods, and Fourier-Transform (FT-IR) spectroscopy. According to these characterization methods the organic polymer phase fills the nanopores of the composite material, providing superb mixing of the component phases in the energetic nanocomposite.